

	Type	L #	Hits	Search Text	DBs
1	BRS	L1	56521	(light or wave) near8 guide	US- PGPUB; USPAT
2	BRS	L2	20383	1 and (groove or conduit or capillary or capillaries or tube?)	US- PGPUB; USPAT
3	BRS	L3	2483	2 and internal\$9 near8 reflect\$9	US- PGPUB; USPAT
4	BRS	L4	1386	3 and refractive near8 index	US- PGPUB; USPAT
5	BRS	L5	1386	3 and refractive near8 (index or indices)	US- PGPUB; USPAT

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AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

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=> s (light or wave) (8w) guide
L1 15283 (LIGHT OR WAVE) (8W) GUIDE

=> s l1 and (groove or conduit or channel or microchannel or capillar? or tube)
L2 1786 L1 AND (GROOVE OR CONDUIT OR CHANNEL OR MICROCHANNEL OR CAPILLAR
? OR TUBE)

=> s l2 and internal? (8w) reflect?
L3 20 L2 AND INTERNAL? (8W) REFLECT?

=> display l3 1-20 ibib abs

L3 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:992126 CAPLUS
DOCUMENT NUMBER: 144:241998
TITLE: Properties of polymeric waveguides as information
transmission channels
AUTHOR(S): Rubinstein, G. M.; Lekishvili, N. G.; Zaikov, G. E.
CORPORATE SOURCE: H. Javakhishvili Tbilisi State University, Tbilisi,
Georgia
SOURCE: Physical Organic Chemistry (2005), 159-166.
Editor(s): D'Amore, Alberto; Zaikov, Gennady
Efremovich. Nova Science Publishers, Inc.: Hauppauge,
N. Y.
CODEN: 69HHBQ; ISBN: 1-59454-275-9
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English

AB A review. According to structure and principle of the light transmission optical fibers, including polymeric waveguides (PG), are subdivided into 2 types: the ones operating by the principle of complete internal reflection and possessing a step profile of the refractive index (SPRI), and light focusing ones possessing a gradient profile of the refractive index (GPRI). Information transmitted by optical fibers usually represents short light pulses. Each pulse may be represented as a great number of beams, each beam entering the fiber at its own angle ϕ . The broadening degree of the pulse is usually estimated by retention time which represents a difference of passing times of the axis and the border meridional ray of the pulse. The bandwidth of optical fibers may be increased by application of light guides with GPRI, in which axis beams are spread in the medium with a high refractive index and, consequently, slower than meridional beams which, in this case, pass by a curvilinear trajectory of the spiral type in a lens-like structure, stipulated by the refractive index gradient. Power injected into guides with GPRI significantly depends on conditions of input, but may be optimized. Inorg. light guides with GPRI are widely applied. As for PG with GPRI, attenuation in them is $\geq 1,000$ dB/km. Light-emitting diode irradiation in relation to PGs is discussed.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:300936 CAPLUS
TITLE: Backlight for 3d display device
INVENTOR(S): Krijn, Marcellinus P.c. M.; Ijzerman, Willem L.; De,

Zwart Siebe T.; Cornelissen, Hugo J.
 PATENT ASSIGNEE(S): Koninklijke Philips Electronics N.V., Neth.; De Zwart, Siebe T.
 SOURCE: PCT Int. Appl.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005031412	A1	20050407	WO 2004-IB51839	20040923
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW,				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: GB 2003-22682 A 20030927
 AB A backlight (5) for a 3D display device, the backlight (5) comprising a planar light guide (7) through which light is guided transversely by internal reflection. The light guide (7) is provided with a plurality of grooves (8), which are configured to direct light propagating within the light guide (7), out of a face (7f) of the light guide (7) so as to form a plurality of line light sources.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:961317 CAPLUS
 TITLE: Apparatus for disinfecting water using ultraviolet radiation
 INVENTOR(S): Saccomanno, Robert J.
 PATENT ASSIGNEE(S): Honeywell International Inc., USA
 SOURCE: U.S. Pat. Appl. Publ., Cont.-in-part of Ser. No. US 2002-268567, filed on 9 Oct 2002 which
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004222163	A1	20041111	US 2004-874293	20040622
US 2003089670	A1	20030515	US 2002-268567	20021009
US 6773584	B2	20040810		
CN 1571758	A	20050126	CN 2002-820478	20021015
WO 2006002222	A2	20060105	WO 2005-US22031	20050622
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM,
KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG,
KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2001-330174P P 20011017
US 2002-268567 A2 20021009
US 2004-874293 A 20040622

AB Ultraviolet radiation is used to disinfect water in a flow tube,
where the flow tube acts as a fluid filled light
guide for the ultraviolet radiation and the ultraviolet radiation
propagates through the flow tube via total internal
reflection.

L3 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:312896 CAPLUS
TITLE: Apparatus for disinfecting water using ultraviolet
radiation
INVENTOR(S): Saccomanno, Robert J.
PATENT ASSIGNEE(S): Honeywell International, Inc., USA
SOURCE: PCT Int. Appl.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003033413	A1	20030424	WO 2002-US32759	20021015
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003089670	A1	20030515	US 2002-268567	20021009
US 6773584	B2	20040810		
CA 2463995	AA	20030424	CA 2002-2463995	20021015
EP 1444168	A1	20040811	EP 2002-801696	20021015
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1571758	A	20050126	CN 2002-820478	20021015
JP 2005506180	T2	20050303	JP 2003-536159	20021015
PRIORITY APPLN. INFO.:			US 2001-330174P P 20011017 US 2002-268567 A 20021009 WO 2002-US32759 W 20021015	
AB Ultraviolet radiation is used to disinfect water (5) in a flow tube, where the flow tube (10) acts as a fluid filled light guide for the ultraviolet radiation and the ultraviolet radiation propagates through the flow tube via total internal reflection.				
REFERENCE COUNT: 4			THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT	

L3 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:964614 CAPLUS
DOCUMENT NUMBER: 138:47031
TITLE: Spectrometer for measuring inelastically scattered
light

INVENTOR(S) : Puppels, Gerwin Jan
 PATENT ASSIGNEE(S) : Erasmus Universiteit Rotterdam, Neth.
 SOURCE: PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002101365	A1	20021219	WO 2002-NL386	20020612
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
NL 1018261	C2	20021213	NL 2001-1018261	20010612
EP 1399731	A1	20040324	EP 2002-736291	20020612
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004263842	A1	20041230	US 2004-480479	20040817
PRIORITY APPLN. INFO.: NL 2001-1018261 A 20010612 WO 2002-NL386 W 20020612				

AB A spectrometer for measuring inelastically scattered light is described comprising a light source; an anal. unit for anal. of a spectral distribution of light from the light source which has been scattered by a sample; a probe provided with a capillary through which light from the light source is guided to the sample and scattered light is guided from the sample to the anal. unit, while the capillary has a wall comprising a channel, so that for light at a transition from the channel to the wall internal reflection occurs, while the capillary is connected such that the channel transports light from the light source and/or the scattered light which is guided to the anal. unit. A probe for use in a Raman spectrometer is also described comprising a first connection for a light source and an anal. unit, a second connection for illuminating a sample to be examined with the light of the light source and intercepting scattered light from the sample, a light guide for guiding light between the connections, wherein the light guide comprises a capillary with a channel and a wall, so that for light at a transition of the channel to the wall, internal reflection occurs, wherein the capillary is connected to the connection such that the channel transports light between the connections in at least one direction. A method of measuring a spectrum of inelastically scattered light is also described. Preferably, the light is guided through the channel of the capillary in both directions.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2001:415261 CAPLUS
 TITLE: Pen type bar-code reader. [Machine Translation].
 INVENTOR(S) : Sugino, Tadaaki
 PATENT ASSIGNEE(S) : Pentel Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2001155109	A2	20010608	JP 1999-333480	19991124

PRIORITY APPLN. INFO.: JP 1999-333480 19991124

AB [Machine Translation of Descriptors]. The surfacing difference of reading of bar-code it enlarges the lighting light of the bar-code aspect, in order to try to be able to read thin bar-code, bright, squeezes light absorbent system and makes the bore diameter narrow, furthermore it is necessary to decrease outside light and the internal reflection et cetera of the tube. It is possible among optical unit, because fiber 23 of the many book in outer circle of light absorbent component 22 is arranged in the cyclic, loss of light to be little, to irradiate to the bar-code aspect effectively, but being processing of the fiber and installation structure complicated, there was a problem that becomes high cost of production. Penetrating the said tube component the lens and the description above which focus the light which is reflected from the bar-code aspect and the said bar-code aspect which reflect the light which was irradiated from the light/write guide and the said light/write guide who lead the light from each one of the luminous component 2 of the symmetrical site and the luminous component said 2 on the center through the component, and the lens which become taper condition of the direction which the inside diameter of the tube which leads the light which is reflected opens it makes the light absorbent component which receives light.

L3 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:596828 CAPLUS
DOCUMENT NUMBER: 129:323674
TITLE: Evaluation of diffraction loss in prism light guides by finite-difference time-domain field modeling
AUTHOR(S): Whitehead, Lorne A.; Su, Wei; Grandmaison, Dmitri N.
CORPORATE SOURCE: Department Physics Astronomy, University British Columbia, Vancouver, BC, V6T 1Z1, Can.
SOURCE: Applied Optics (1998), 37(25), 5836-5842
CODEN: APOPAI; ISSN: 0003-6935
PUBLISHER: Optical Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Prism light guides are hollow dielec. tubes that use prismatic facets to guide light by total internal reflection. An unresolved problem was to determine the magnitude of loss caused by diffraction in prism light guides. Neither exptl. measurement nor an anal. solution has yet been achieved, so the authors attached the problem numerically, in two steps. First, the authors found a way to represent such a transitionally invariant three-dimensional system as an equivalent two-dimensional problem. Second, the authors employed the finite-difference time-domain algorithm, with periodic boundary conditions, to yield a computation problem of manageable size. The diffraction-induced transmissivity of a prism light guide wall is of the order of the wavelength divided by the prism size-a result that has encouraging practical implications.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:255049 CAPLUS
DOCUMENT NUMBER: 126:274235

TITLE: Monte Carlo simulations of sodium iodide detector modules for a cylindrical SPECT system
AUTHOR(S): Ordóñez, C. E.; Chang, W.
CORPORATE SOURCE: Rush-Presbyterian-St. Luke's Medical Center, Chicago, IL, USA
SOURCE: IEEE Nuclear Science Symposium and Medical Imaging Conference Record, San Francisco, Oct. 21-28, 1995 (1996), Meeting Date 1995, Volume 3, 1548-1552. Editor(s): Moonier, Patricia A. Institute of Electrical and Electronics Engineers: New York, N. Y. CODEN: 64FXAS
DOCUMENT TYPE: Conference
LANGUAGE: English

AB Monte Carlo simulation methods are used to investigate the light output characteristics and energy resolution of detector modules that consist of long, narrow bars of sodium iodide crystals. These modules are designed to be components of a proposed modular cylindrical single photon emission computed tomog. system suitable for cardiac imaging. The simulations are used to investigate the effects of crystal geometry and detector surface reflection properties on the total light output and energy resolution of the detector modules. The simulations include the effects on scintillation photons due to internal photon absorption at the crystal and light guide surfaces, partial (Fresnel) reflections and total internal reflections at the crystal/quartz exit window interface, refraction in the light guide, and finite quantum efficiency of photomultiplier tubes. For the imaging of 140-keV gamma rays, modules with 3-mm wide crystals and diffusely-reflecting surfaces are expected to have total light output of about 12.1% and energy resolution of about 10.9%. Modules with 4-mm wide crystals are expected to have total light output of about 13.9% and energy resolution of about 9.9%.

L3 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:98095 CAPLUS
DOCUMENT NUMBER: 124:159735
TITLE: Evanescent-wave guiding of atoms in hollow optical fibers
AUTHOR(S): Renn, Michael J.; Donley, Elizabeth A.; Cornell, Eric A.; Wieman, Carl E.; Anderson, Dana Z.
CORPORATE SOURCE: Dep. Phys., Univ. Colorado, Boulder, CO, 80309-0440, USA
SOURCE: Physical Review A: Atomic, Molecular, and Optical Physics (1996), 53(2), R648-R651
CODEN: PLRAAN; ISSN: 1050-2947
PUBLISHER: American Physical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The authors use evanescent laser light to guide atoms through hollow-core optical fibers. The light, detuned to the blue side of Rb's D2 resonance lines, is launched into the glass region of a hollow capillary fiber and guided through the fiber by total internal reflection from the glass walls. Atoms interacting with the evanescent component of the field are repelled from the wall and guided through the fiber hollow. A 2nd laser tuned to the red side of resonance was used to initially inject the atoms into the evanescent guide. An optical intensity threshold for guiding is observed as the evanescent-field-induced dipole forces exceed the van der Waals forces.

L3 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1982:154677 CAPLUS
DOCUMENT NUMBER: 96:154677
TITLE: Device for selective determination of the content of β -emitting nuclides in a mixture with a known

isotopic composition in liquid, gaseous, and friable media

INVENTOR(S): Bachurin, A. V.; Kazanskaya, V. A.; Matveev, V. V.; Nesterov, V. P.; Sokolov, A. D.; Fedorovskii, Yu. P.

PATENT ASSIGNEE(S): USSR

SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1981, (44), 296.

CODEN: URXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 743385	A1	19811130	SU 1977-2546471	19771118
PRIORITY APPLN. INFO.:			SU 1977-2546471	A 19771118

AB The device contains 2 or more detecting units enclosed in absorbing shields, and a measurement system with input connected to the output of each of the detecting units. To increase the selectivity and threshold sensitivity, the detecting units are based on developed-surface scintillation detectors, and have sensing components in the form of total-internal-reflection light guides. Various thicknesses of scintillation layers are used; their thickness is in the ratio of ≥ 1.5 with that of the absorbing shields, which are made of materials containing a dense high-atomic number element, primarily Pb, Cd, or Cs. The sensing elements are joined into groups distinguished by the scintillation layer parameter, e.g., by the thickness of the absorber material or materials. Each of the sensing element groups is optically connected to the corresponding photoreceiver, and the entire measurement device contains an impulse- or amplitude-form signal dividing channel.

L3 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1964:474444 CAPLUS

DOCUMENT NUMBER: 61:74444

ORIGINAL REFERENCE NO.: 61:12912e-g

TITLE: Directional scintillation detector for 14-m.e.v. neutrons

AUTHOR(S): Arkhangel'skii, B. V.; Saukov

SOURCE: Stsintillyatory i Stsintillyats. Materialy (Kharkov: Khar'kovsk. Univ.) Sb. (1963) 152-4
From: Ref. Zh., Fiz. 1964, Abstr. No. 5A319.

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB A very efficient direction scintillation detector of fast n is described. The scintillator is made up of 25 scintillation sheets 40 + 50 + 1 mm. The surfaces of these sheets were carefully polished. To absorb recoil p a Pb foil 0.4-mm. thick was placed between the sheets. Light pulses fell on the cathode of a photomultiplier tube chiefly on the polished surfaces thanks to complete internal reflection. A conical light guide 30-mm. long was attached to the end of the apparatus. The performance of the detector was tested on a collimator beam of 14-m.e.v. n. The dependence of the detector efficiency on the coefficient of amplification of the recording unit at an angle of n incidence of 0°, and the dependence of the efficiency on the angle of incidence at different amplification coeffs. are given. At an amplification coefficient of 90, the directivity of the detector is 3.3 and efficiency is 1.17%. Maximum light yield of the detector for 14-m.e.v. n is 6-8% of that of stilbene.

L3 ANSWER 12 OF 20 COMPENDEX COPYRIGHT 2006 EEI on STN

ACCESSION NUMBER: 1996(44):4682 COMPENDEX

TITLE: Monte Carlo simulations of sodium iodide detector modules for a cylindrical SPECT system.
AUTHOR: Ordonez, C.E. (Rush-Presbyterian-St.Luke's Medical Cent, Chicago, IL, USA); Chang, W.
MEETING TITLE: Proceedings of the 1995 IEEE Nuclear Science Symposium and Medical Imaging Conference.Part 3 (of 3).
MEETING LOCATION: San Francisco, CA, USA
MEETING DATE: 21 Oct 1995-28 Oct 1995
SOURCE: IEEE Nuclear Science Symposium & Medical Imaging Conference v 3 1995.IEEE, Piscataway, NJ, USA,95CH35898.p 1548-1552
CODEN: 85OQAD
PUBLICATION YEAR: 1995
MEETING NUMBER: 45267
DOCUMENT TYPE: Conference Article
TREATMENT CODE: Theoretical
LANGUAGE: English

AN 1996(44):4682 COMPENDEX

AB Monte Carlo simulation methods are used to investigate the light output characteristics and energy resolution of detector modules that consist of long, narrow bars of sodium iodide crystals. These modules are designed to be components of a proposed modular cylindrical single photon emission computed tomography system suitable for cardiac imaging. The simulations are used to investigate the effects of crystal geometry and detector surface reflection properties on the total light output and energy resolution of the detector modules. The simulations include the effects on scintillation photons due to internal photon absorption at the crystal and light guide surfaces, partial (Fresnel) reflections and total internal reflections at the crystal/quartz exit window interface, refraction in the light guide, and finite quantum efficiency of photomultiplier tubes. For the imaging of 140-keV gamma rays, modules with 3-mm wide crystals and diffusely-reflecting surfaces are expected to have total light output of about 12.1% and energy resolution of about 10.9%. Modules with 4-mm wide crystals are expected to have total light output of about 13.9% and energy resolution of about 9.9%. (Author abstract) 4 Refs.

L3 ANSWER 13 OF 20 COMPENDEX COPYRIGHT 2006 EEI on STN

ACCESSION NUMBER: 1985(4):40116 COMPENDEX

DOCUMENT NUMBER: *8531708

; 850426505

TITLE: TOUCH-INPUT OVERLAY FOR crt OR OTHER SCANNING DISPLAYS.

AUTHOR: Garwin, R.L.; Levine, J.L.

SOURCE: IBM Tech Discl Bull v 27 n 7B Dec 1984 p 4436-4438

CODEN: IBMTAA ISSN: 0018-8689

PUBLICATION YEAR: 1984

DOCUMENT TYPE: Journal

TREATMENT CODE: Application

LANGUAGE: English

AN 1985(4):40116 COMPENDEX DN *8531708; 850426505

AB A touch-sensitive input device for use with a scanning display, such as a crt, can be assembled using a transparent overlay or plate over the face of the crt, which overlay has a light collector with frequency shifting capability spaced away and surrounding the periphery with an interruption for photodetection. The invention employs a principle that a transparent overlay as a light guide of uniform thickness with smooth faces will guide essentially no light to its edge from a display screen which is spaced so as not to be in optical contact with the light guide. When an object such as a finger or stylus makes optical contact with the light guide, light passing through the overlay from the display can scatter from the touching object and approximately 1/4 of the light scattered is in the angular range of total internal reflection and will be guided

without loss to the edge where it can be detected by photodetectors.

L3 ANSWER 14 OF 20 COMPENDEX COPYRIGHT 2006 EEI on STN

ACCESSION NUMBER: 1975(2):968 COMPENDEX

DOCUMENT NUMBER: 750210523

TITLE: BROADENING OF PICOSECOND PULSES IN LIGHT
GUIDES AND FRUSTRATED TOTAL INTERNAL
REFLECTION.

AUTHOR: Rubinshtein, G.M. (Gruz SSR Acad of Sci); Perel'man,
M.E.

SOURCE: Sov J Quantum Electron v 4 n 4 Oct 1974 p 544-545
CODEN: SJQEAF

PUBLICATION YEAR: 1974

LANGUAGE: English

AN 1975(2):968 COMPENDEX DN 750210523

AB Geometric-optics are used to show that allowance for the frustrated total internal reflection in the propagation of light in planar guides should result in the splitting of a short pulse into two separate components with opposite polarizations. In a cylindrical guide (fiber) such reflection produces, in agreement with the experimental results, an asymmetric distortion of the pulse. This effect should appear most clearly in capillary guides. 13 refs.

L3 ANSWER 15 OF 20 INSPEC (C) 2006 IET on STN

ACCESSION NUMBER: 2001:7075185 INSPEC

DOCUMENT NUMBER: A2001-23-2940-025; B2001-12-7420-036

TITLE: DIRC, the particle identification system for BABAR

AUTHOR: Schwiening, J. (Stanford Linear Accel. Center,
Stanford Univ., CA, USA)

SOURCE: ICHEP 2000. Proceedings of the 30th International
Conference on High Energy Physics, vol.2, 2001, p.
1250-1 vol.2 of 2 vol.(xxiii+xxi+1481) pp., 3 refs.
Editor(s): Lim, C.S.; Yamanaka, T.
ISBN: 981 02 4533 5
Published by: World Scientific, Singapore, Singapore
Conference: ICHEP 2000. Proceedings of the 30th
International Physics, Osaka, Japan, 27 July-2 Aug.
2000
Sponsor(s): IUPAP; Sci. Council of Japan; Phys. Soc
Japan; Osaka Univ. KEK
DOCUMENT TYPE: Conference; Conference Article
TREATMENT CODE: Practical
COUNTRY: Singapore
LANGUAGE: English

AN 2001:7075185 INSPEC DN A2001-23-2940-025; B2001-12-7420-036

AB The DIRC, a novel type of Cherenkov ring imaging device, is the primary hadronic particle identification system for the BABAR detector at the asymmetric B-factory, PEP-II at SLAC. BABAR began taking data with colliding beams mode in late spring 1999. This paper describes the performance of the DIRC during the first 16 months of operation

L3 ANSWER 16 OF 20 INSPEC (C) 2006 IET on STN

ACCESSION NUMBER: 1998:6076729 INSPEC

DOCUMENT NUMBER: A1998-24-4280L-011; B1998-12-4130-036

TITLE: Evaluation of diffraction loss in prism light
guides by finite-difference time-domain field
modeling

AUTHOR: Whitehead, L.A.; (Dept. of Phys. & Astron., British
Columbia Univ., Vancouver, BC, Canada), Wei Su;
Grandmaison, D.N.

SOURCE: Applied Optics (1 Sept. 1998), vol.37, no.25, p.
5836-42, 9 refs.
CODEN: APOPAI, ISSN: 0003-6935
SICI: 0003-6935(19980901)37:25L:5836:EDLP;1-#

Price: 0003-6935/98/255836-07\$15.00/0

Published by: Opt. Soc. America, USA

DOCUMENT TYPE: Journal
TREATMENT CODE: Theoretical
COUNTRY: United States
LANGUAGE: English

AN 1998:6076729 INSPEC DN A1998-24-4280L-011; B1998-12-4130-036

AB Prism light guides are hollow dielectric tubes that use prismatic facets to guide light by means of total internal reflection. An unresolved problem has been to determine the magnitude of loss caused by diffraction in prism light guides. Neither experimental measurement nor an analytical solution has yet been achieved, so we attacked the problem numerically, in two steps. First, we found a way to represent such a transitionally invariant three-dimensional system as an equivalent two-dimensional problem. Second, we employed the finite-difference time-domain algorithm, with periodic boundary conditions, to yield a computation problem of manageable size. We found that the diffraction-induced transmissivity of a prism light guide wall is of the order of the wavelength divided by the prism size-a result that has encouraging practical implications

L3 ANSWER 17 OF 20 INSPEC (C) 2006 IET on STN

ACCESSION NUMBER: 1996:5369154 INSPEC

DOCUMENT NUMBER: A1996-20-8760K-009; B1996-10-7510B-176

TITLE: Monte Carlo simulations of sodium iodide detector modules for a cylindrical SPECT system

AUTHOR: Ordonez, C.E.; Chang, W. (St. Lukes Med. Center, Chicago, IL, USA)

SOURCE: 1995 IEEE Nuclear Science Symposium and Medical Imaging Conference Record (Cat. No.95CH35898), vol.3, 1995, p. 1548-52 vol.3 of 3 vol. li+1814 pp., 4 refs. Editor(s): Moonier, P.A.

ISBN: 0 7803 3180 X

Price: 0 7803 3180 X/96/\$5.00

Published by: IEEE, New York, NY, USA

Conference: 1995 IEEE Nuclear Science Symposium and Medical Imaging Conference Record, San Francisco, CA, USA, 21-28 Oct. 1995

DOCUMENT TYPE: Conference; Conference Article

TREATMENT CODE: Theoretical

COUNTRY: United States

LANGUAGE: English

AN 1996:5369154 INSPEC DN A1996-20-8760K-009; B1996-10-7510B-176

AB Monte Carlo simulation methods are used to investigate the light output characteristics and energy resolution of detector modules that consist of long, narrow bars of sodium iodide crystals. These modules are designed to be components of a proposed modular cylindrical single photon emission computed tomography system suitable for cardiac imaging. The simulations are used to investigate the effects of crystal geometry and detector surface reflection properties on the total light output and energy resolution of the detector modules. The simulations include the effects on scintillation photons due to internal photon absorption at the crystal and light guide surfaces, partial (Fresnel) reflections and total internal reflections at the crystal/quartz exit window interface, refraction in the light guide, and finite quantum efficiency of photomultiplier tubes. For the imaging of 140-keV gamma rays, modules with 3-mm wide crystals and diffusely-reflecting surfaces are expected to have total light output of about 12.1% and energy resolution of about 10.9%. Modules with 4-mm wide crystals are expected to have total light output of about 13.9% and energy resolution of about 9.9%

L3 ANSWER 18 OF 20 INSPEC (C) 2006 IET on STN

ACCESSION NUMBER: 1996:5216455 INSPEC
 DOCUMENT NUMBER: A1996-08-3280P-002
 TITLE: Evanescent-wave guiding of atoms in hollow optical fibers
 AUTHOR: Renn, M.J.; Donley, E.A.; Cornell, E.A.; Wieman, C.E.; Anderson, D.Z. (Dept. of Phys., Colorado Univ., Boulder, CO, USA)
 SOURCE: Physical Review A (Atomic, Molecular, and Optical Physics) (Feb. 1996), vol.53, no.2, p. R648-51, 9 refs.
 CODEN: PLRAAN, ISSN: 1050-2947
 SICI: 1050-2947(199602)53:2L.R648:EWGA;1-M
 Price: 1050-2947/96/53(2)/648(4)\$06.00
 Published by: APS through AIP, USA
 DOCUMENT TYPE: Journal
 TREATMENT CODE: Theoretical; Experimental
 COUNTRY: United States
 LANGUAGE: English
 AN 1996:5216455 INSPEC DN A1996-08-3280P-002
 AB We use evanescent laser light to guide atoms through hollow-core optical fibers. The light, detuned to the blue side of rubidium's D2 resonance lines, is launched into the glass region of a hollow capillary fiber and guided through the fiber by total internal reflection from the glass walls. Atoms interacting with the evanescent component of the field are repelled from the wall and guided through the fiber hollow. A second laser tuned to the red side of resonance is used to initially inject the atoms into the evanescent guide. An optical intensity threshold for guiding is observed as the evanescent-field-induced dipole forces exceed the van der Waals forces

L3 ANSWER 19 OF 20 INSPEC (C) 2006 IET on STN
 ACCESSION NUMBER: 1992:4094716 INSPEC
 DOCUMENT NUMBER: A1992-07-0762-005; B1992-04-7230C-010
 TITLE: A two-channel light-guide
 IR radiometer with semiconductor modulator
 AUTHOR: Avdoshin, E.S.
 SOURCE: Measurement Techniques (March 1991), vol.34, no.3, p. 233-6, 12 refs.
 CODEN: MSTCAL, ISSN: 0543-1972
 Price: 0543-1972/91/3403-0233\$12.50
 Translation of: Izmeritel'naya Tekhnika (March 1991), vol.34, no.3, p. 9-11
 CODEN: IZTEAW, ISSN: 0021-3349
 DOCUMENT TYPE: Journal; Translation Abstracted
 TREATMENT CODE: Practical
 COUNTRY: United States; USSR
 LANGUAGE: English
 AN 1992:4094716 INSPEC DN A1992-07-0762-005; B1992-04-7230C-010
 AB Light-guide radiometers are widely used in monitoring infrared radiation; two-channel ones containing semiconductor modulators are the most promising, where the radiation is absorbed by the free carriers in a germanium crystal containing a p-n junction. A fiber-optic two-channel infrared radiometer of differential type, which contains a flexible light guide, optical coupler, and a body, within which are fluorite lenses together with radiators and the modulator plates with an internal-reflection prism a reference source, a conical light guide, and a photocell in a holder, is described. The radiometer also includes an electronic recorder. There are two channels: the measurement one, which receives the radiation via a fiber channel, and the reference one, which works with the reference source

L3 ANSWER 20 OF 20 INSPEC (C) 2006 IET on STN

ACCESSION NUMBER: 1976:958035 INSPEC

DOCUMENT NUMBER: B1976-039038

TITLE: Optical fibres and wave guides

SOURCE: Automazione e Strumentazione (June 1976), vol.24,
no.6, p. 297-302, 0 refs.

CODEN: ATSZAS, ISSN: 0005-1284

DOCUMENT TYPE: Journal

TREATMENT CODE: Practical

COUNTRY: Italy

LANGUAGE: Italian

AN 1976:958035 INSPEC DN B1976-039038

AB Metal circuits subject to interference will be eliminated by using cables of greatly reduced dimensions containing optical fibres capable of routing the maximum number of messages undisturbed by extraneous signals. Already congested world cables systems can readily be replaced and can supply in addition channels for data transmission and videotelephony including visible information on bank rates and share prices. The development of optical fibres for telecommunications is due to the recent production of a glass with very high transparency and with a refraction index less than the ambient medium so that the wave is propagated by internal reflection thus eliminating the need for straight cables